

# Pulmonary metastasis from endometrial carcinoma

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## DESCRIPTION

A woman aged 69 years was referred to our department for the evaluation of a solitary pulmonary nodule. She had undergone total abdominal hysterectomy with bilateral salpingo-oophorectomy on diagnosis of endometrioid endometrial carcinoma (FIGO stage 1B, grade 2) 4 years ago. At that time, she received adjuvant treatment (six cycles of carboplatin and paclitaxel). After 3 years, chest CT scan revealed a nodule of 0.5 cm in diameter with cavitation in the right upper lobe of the lung (figure 1A). One year later, the pulmonary nodule increased in size (1.3 cm; figure 1B), and she underwent CT scan-guided percutaneous transthoracic biopsy, which subsequently revealed potent oestrogen receptor-positive metastatic disease. She underwent wedge resection of the right upper lobe because the primary tumour site was controlled without an uncontrollable extrapulmonary disease. The resection margin was clear, and the nodule was well demarcated with a thin-walled cavity, measuring 1.5 cm in the largest dimension. The histological features were equivalent to those of the previous endometrial carcinoma (figure 1C). Furthermore, immunohistochemical analysis demonstrated positive oestrogen and progesterone receptors (figure 1D,E). The results of thyroid transcription factor-1 and GATA-binding protein 3 were negative, and the Ki-67 proliferative index was 75%. These findings suggested that the tumour favoured metastasis from endometrial carcinoma rather than the primary lung cancer. Three months

## Learning points

- ▶ In patients with malignancy, a metastatic pulmonary tumour should be considered in the differential diagnosis of a solitary pulmonary nodule.
- ▶ A lung biopsy should be performed for preoperative diagnosis because it is difficult to differentiate from primary lung cancer in chest imaging.

after metastectomy, she exhibited recovery with no evidence of recurrence.

Endometrial carcinoma is the most common gynaecologic malignancy in high-income countries. Although the disease is confined to the uterus in a majority of patients, exhibiting a favourable prognosis, 13% of all endometrial cancers recur and 68%–100% of recurrences occur within 3 years.<sup>1</sup> Typical metastatic sites include local pelvic recurrence, pelvic and para-aortic nodes, peritoneum and lungs.<sup>2</sup> The usual pattern of pulmonary metastasis reveals multiple pulmonary nodules, and solitary pulmonary nodule with cavitation is rare.<sup>3</sup> In this case, the CT finding of the tumour with solitary nodule and thin-walled cavity added to the difficulty in differentiating it from primary lung cancer in chest imaging.

**Contributors** SM cared for the patient, performed the clinical reasoning and wrote the article. JI and TI cared for the patient. KN made the pathological diagnosis and contributed microscopic pictures.

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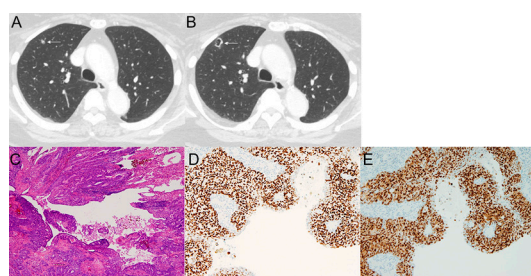
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**Figure 1** Chest CT scan (A) 3 years postoperatively and (B) 4 years postoperatively (arrow). (C) Microscopic image of the tumour (H&E, ×100) and (D, E) focal staining for oestrogen and progesterone receptor monoclonal antibodies at ×100.



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